CLIMATE BENEFITS OF NAJD

BEING A TEXT OF TERM PAPER
: PRESENTED BY

- Faisal Ahmed Al-Obaikan

Student number: 1941315

Architecture of Najd

- The Najd Region is an area where smaller towns and villages extended along valleys and water sources. The local architecture was very much influenced by the predominantly hot and dry climatic conditions as well as the strict socio-cultural traditions. Dwellings were closely clustered and separated by narrow, internal winding roads to ensure constant shade. The houses were generally two floors, built around an open central courtyard and linked corridor-streets. Mud bricks, stone, lime plaster and timber were the common building materials



- The Najd region is the central region of Saudi Arabia, also housing the national capital Riyadh. A Najd vernacular house can be typified as square or rectangular with rarely more than one floor [48]. Rooms are arranged around the central colonnaded courtyard and have small windows (see Figure 3). The adobe walls, floors and roof are between 50 cm and 80 cm thick, or sometimes even more



For thousands of years mud houses have represented the practical wisdom and spirituality of people, particularly those of desert regions, who learned how to use local materials to build homes that fitted the environmental and cultural conditions, in which they lived. As a case study, the central region of Saudi Arabia exhibits a tradition of earth architecture that is unique in style, culture and .sustainability



Urban compactness: windowless facades, less exposure to solar heat and rays and more air movement, relationship with .sky



Palm Benefits

The palm tree is used in carpentry and building materials, and palm leaves are used in house roofing and in the manufacture of chairs and paper

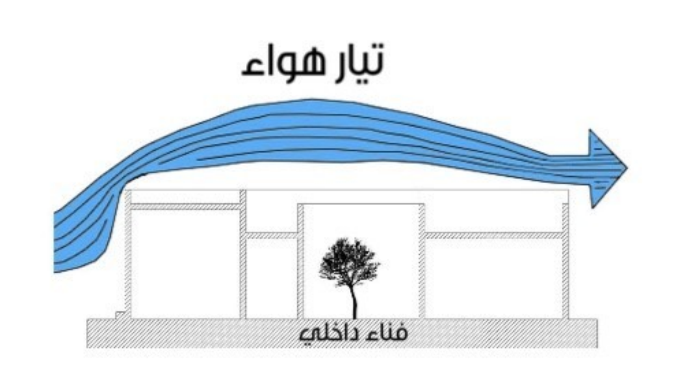
Their leaves and branches aren't only used to make roofs, but also used for some parts of the building and furniture with high quality.

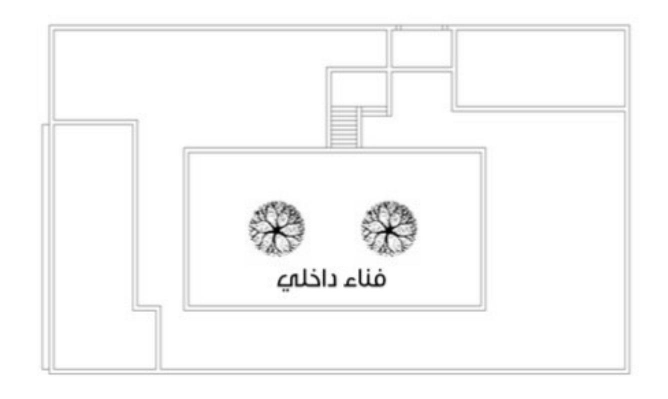
■ The palm oases surrounding the village reduce the hot and dry desert climate that prevails most of the year

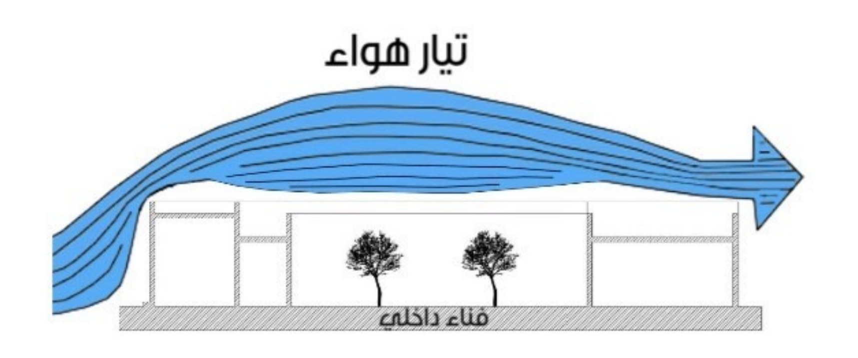


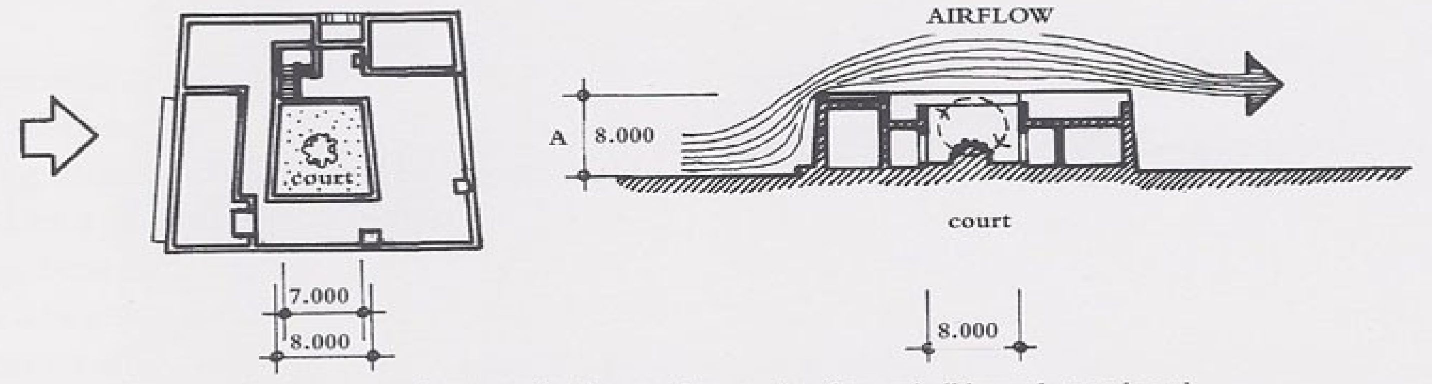
:Courtyard and airflow



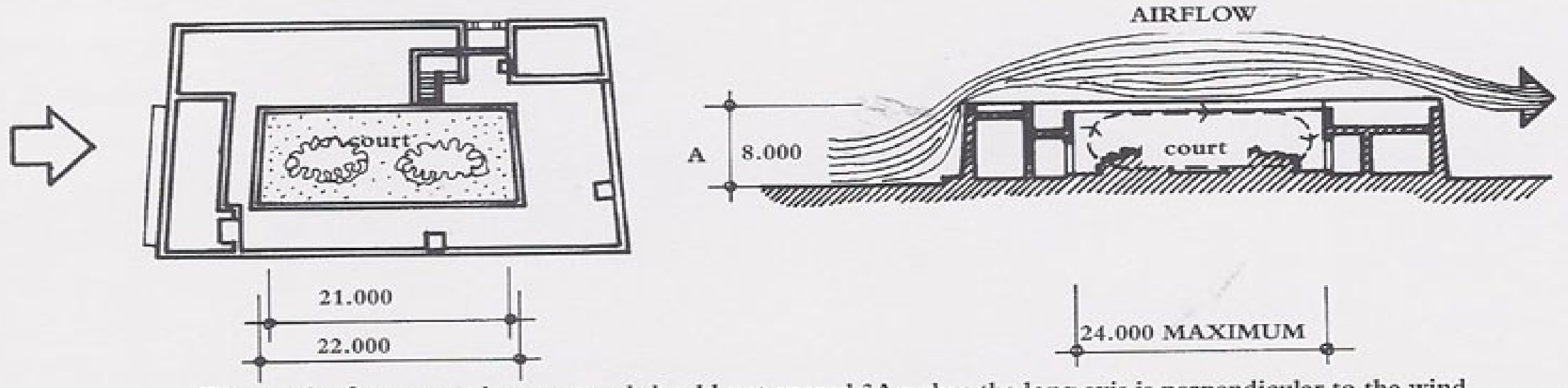




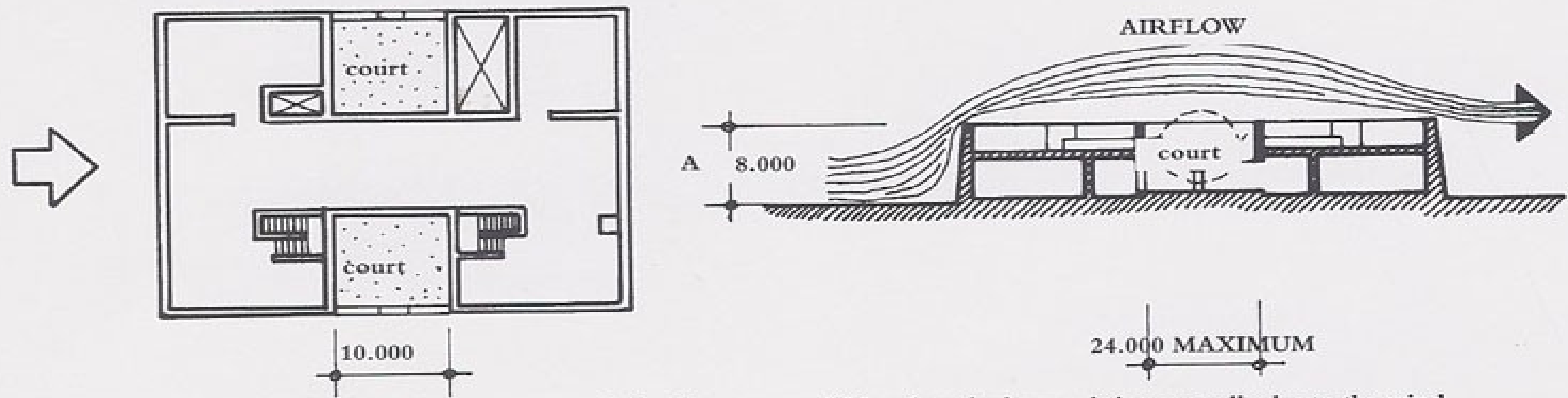




A square central courtyard offers good protection from windblown dust and sand



The depth of a rectangular courtyard should not exceed 3A unless the long axis is perpendicular to the wind



The depth of a perimeter courtyard should not exceed 3A unless the long axis is perpendicular to the wind